

**PENGARUH PENAMBAHAN *STABILIZER* DAN SUSU SKIM
TERHADAP KUALITAS FISIKOKIMIA DAN SENSORIS
PRODUK SUSU FERMENTASI PROBIOTIK
Pediococcus acidilacticii BE**

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INTISARI

Penelitian ini bertujuan untuk melihat efektifitas penambahan *stabilizer* dan susu skim terhadap kualitas fisikokimia dan sensoris produk susu fermentasi probiotik *Pediococcus acidilacticii* BE atau “Lowcose” sebagai agensia pangan kesehatan penurunan gula darah. Penelitian ini dilakukan menggunakan *Two-way ANOVA* sebanyak tiga kali ulangan dengan uji lanjutan *Duncan’s New Multiple Range Test* (DMRT). Data pengujian sensoris dianalisis menggunakan uji Kruskal Wallis dan pengujian lanjutan Mann-Whitney U Test. Perlakuan yang dilakukan antara lain dengan melakukan penambahan agar sebagai *stabilizer* dan susu skim dengan persentase berbeda serta dilakukan pengujian fisiko-kimia dan sensoris. Susu fermentasi dibuat dengan penambahan probiotik *Pediococcus acidilacticii* BE sebagai kultur starter. Persentase *stabilizer* yang ditambahkan dalam produk sebanyak 0,1%, 0,3%, dan 0,5% (w/v) sedangkan untuk persentase penambahan susu skim sebanyak 0%, 2%, 4%, dan 6% (w/v). Parameter yang diamati antara lain viskositas, sineresis, total *solid*, kadar air, nilai pH, keasaman, dan sensoris dari susu fermentasi. Hasil analisis yang didapatkan bahwa perbedaan persentase penambahan susu skim dan *stabilizer* berpengaruh nyata ($P < 0,05$) terhadap viskositas, sineresis, kadar air, dan total *solid*. Penambahan susu skim dan *stabilizer* tidak memberikan pengaruh ($P > 0,05$) terhadap pH dan keasaman. Hasil sensoris didapatkan bahwa perbedaan persentase susu skim dan *stabilizer* memberikan pengaruh secara nyata ($P < 0,05$) terhadap rasa dan tekstur produk. Penambahan susu skim dan *stabilizer* tidak memberikan pengaruh ($P > 0,05$) terhadap aroma dan warna produk. Penambahan susu skim dan *stabilizer* meningkatkan kualitas fisikokimia dan sensoris susu fermentasi dengan penambahan susu skim 4% dan *stabilizer* 0,1% dinilai paling efektif.

Kata kunci : Susu skim, *Stabilizer*, *Pediococcus acidilacticii* BE, Kualitas sensoris.

**THE INFLUENCE OF *STABILIZER* AND SKIM MILK POWDER
ADDITION ON THE PHYSICOCHEMICAL AND SENSORY
QUALITY OF PROBIOTIC FERMENTED MILK PRODUCTS
CONTAINING *Pediococcus acidilacticii* BE**

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ABSTRACT

This study aims to evaluate the effectiveness of adding stabilizers and skim milk on the physicochemical and sensory quality of the probiotic fermented milk product *Pediococcus acidilacticii* BE, known as “Lowcose,” as a functional factors agent for lowering glucose. The study was conducted using a Two-way ANOVA with three replications and further tested using Duncan’s New Multiple Range Test (DMRT). Organoleptic test data were analyzed using the Kruskal Wallis test, and significant results were further tested using the Mann-Whitney U Test. Treatments included the addition of *stabilizers* and skim milk in varying percentages, followed by physicochemical and sensory testing, each conducted three times. The fermented milk was prepared by inoculation the probiotic *Pediococcus acidilacticii* BE as a starter culture. The percentages of *stabilizers* added to the product were 0.1%, 0.3%, and 0.5% (w/v), while the percentages of skim milk added were 0%, 2%, 4%, and 6% (w/v). The observed parameters included viscosity, syneresis, total *solids*, moisture content, pH value, acidity, and the organoleptic properties of the fermented milk. The analysis results indicated that different percentages of skim milk and *stabilizer* addition significantly ($P < 0.05$) affected viscosity, syneresis, moisture content, and total *solids*. The addition of skim milk and *stabilizers* did not have a significant effect ($P > 0.05$) on pH and acidity. The organoleptic results showed that different percentages of skim milk and *stabilizer* significantly ($P < 0.05$) affected the taste and texture of the product. However, the addition of skim milk and *stabilizers* did not significantly affect ($P > 0.05$) the aroma and color of the product. The addition of 4% skim milk and 0,1% stabilizer was deemed the most effective in enhancing the physicochemical and sensory quality of the fermented milk.

Keywords : skim milk, stabilizer, *Pediococcus acidilacticii* BE, organoleptic quality